

Site: The Fields Neighborhood ParkInspection Date: 10/07/2021

Background: The Fields Neighborhood Park is a municipal park located in NW Portland. Site soils contain elevated concentrations of petroleum hydrocarbons, lead, and polynuclear aromatic hydrocarbons. The selected remedial action for The Fields Neighborhood Park is an engineered soil cap with a geotextile fabric marker and either two (2) feet of clean soil or concrete (*e.g.*, structure foundations, pathways, and sidewalks). This inspection report was completed to assess the condition of the capped area which includes the entire park (*i.e.*, landscaped soil, structure foundations, perimeter sidewalks, internal pathways, and storm water drainage features).

Location Description: (*i.e.*, boundary streets)NW 11th, NW Overton, and NW Naito (1N1E 34BB Lot 2629)**Party Performing Inspection / Preparing Report:**

Bethany Nabhan Environmental Specialist / BES

John O'Donovan Engineer III / BES

Kyle DeHart Risk Specialist II / Portland Parks & Recreation

Contact Numbers:

503-823-5524

503-823-7881

503-502-4534

Inspection Performed For:Portland Parks & Recreation
6437 SE Division St.
Portland, OR 97206

Hardscape Areas: Inspect the concrete foundation, sidewalks, and pathways for evidence of cracks or unusual weathering that show the potential to allow soil to migrate through the cap or allow direct exposure to soils. List observations made and area(s) requiring maintenance.

Hardscaped areas are in good condition. Based on our assessment, the cap is not compromised in the hardscape areas of the park. See attached Figure 1 and Photo Log.

Cracks, Settlement? Yes **X** No

Location: Only minor cracking and evidence of settling was observed in the concrete sidewalks and structural foundations on the perimeter of the park. These minor cracks (generally <0.5 inches) do not penetrate the cap. Cracks were observed along the asphalt path that have been observed in previous inspections. These cracks do not penetrate the cap, but the cracks do appear to make it through the pathway pavement in a few locations. Separation at the cracks was not observed. One (1) brick pathway is separating slightly but the separation has not changed in the past few years. Damage does not appear to penetrate the cap. No new damage was observed during this year's inspection.

Maintenance required? Yes ___ No **X**

Holes, Penetrations? Yes ___ No **X**

Location: None

Maintenance required? Yes ___ No **X**

Landscape Areas: Inspect landscape areas for evidence of holes, animal burrows, or cracks that could expose the underlying soil. List observations made and area(s) requiring maintenance.

Landscaped areas, including the central grass area, other areas with plantings, as well as the dog off-leash area in the northern end of the park and the children's playground in the southern end of the park, were inspected for holes, cracks, and visual evidence of exposed demarcation geotextile fabric. Two (2) holes, appearing to be dog dig holes, were observed in the central grass area. These holes were approximately 0.5-1 ft in diameter and less than 4 inches deep. No other damage was observed in the landscaped areas. The dog off-leash area and the children's playground were both in good condition and no damage was observed. Evidence of animal burrows were not observed this year and Parks staff continue to control for rodents in the park. See attached Figure 1 and Photo Log.

Exposed Soil or Fabric? Yes ___ No **X**

Maintenance required? Yes **X** No ___

The holes noted above were backfilled by Parks staff to maintain the two (2) foot cap. A receipt for the source of the fill soil and laboratory data from BES's Water Pollution Control Lab demonstrating the soil is free of contaminants of concern for the site are attached. This is the same material that was used to fill in last year's dog dig holes. Parks re-tested the material and confirmed it to be free from petroleum hydrocarbon contamination. A receipt for the sandy loam that was used as backfill and the laboratory data are attached to this report. See attached Figure 1 and Photo Log.

Surface Water Drainage Features: Inspect storm water drainage paths and catch basins for evidence of blockage by debris or erosion damage caused by inadequate drainage control. List observations made and area(s) requiring maintenance.

Storm water drainage paths and catch basins were clear and functional during the inspection.

Groundwater Seepage Areas: Note any evidence of groundwater seepage areas and associated problems.

No groundwater seepage areas were observed during the inspection

Additional Comments:

Photographs have been taken of all areas of concern to document the condition of the cap. Photographic evidence includes pictures of any damage and repairs performed.

Please see attached Photo Locations Map and Photo Log.

Send one copy of completed Inspection Report, with supporting documentation including photographs and maintenance and repair records to:

Oregon Department of Environmental Quality
NW Region UST Cleanups & Environmental Cleanup Programs
700 NE Multnomah St., Suite #600
Portland, OR 97232
ATTN: Rebecca Wells-Albers





Photo Point 1 – minor crack in curb has not changed since last year



Photo Point 2 – hairline crack in concrete has not changed since last year



Photo Point 3 – Cracks in concrete panel near the Portland Loo



Photo Point 3 – Minor crack in concrete panel near tree well and Portland Loo



Photo Point 4 – Crack in concrete panel appears the same as last year



Photo Point 5 – Hairline crack in concrete panel



Photo Point 6 – Caulking along seam showing slight separation but in fair condition. No danger to the cap



Photo Point 7 – Separation in bricks appears the same as last year's inspection.



Photo Point 8 – Minor cracks in corners of concrete panels



Photo Point 9 – Crack in driveway panel appears the same as last year's inspection



Photo Point 10 – crack in curb, no risk to cap



Photo Point 11 – Well monument in good condition



Photo Point 12 – Minor crack in concrete panels, no risk to cap.



Photo Point 13 – Vector control continues to be used to control rodents. Several vector control boxes are located around the park. No burrow holes were observed in landscaped areas.



Photo Point 14 – Crack in concrete at bottom of stairs looks the same as last year's inspection



Photo Point 15 – Seams in walkway have not changed since last year's inspection



Photo Point 16 – Cracks in cement border in play area. No risk to cap.



Photo Point 17 – Playground area in great condition.



Photo Point 18 – Typical wear/weathering of asphalt path. No risk to cap.



Photo Point 19 – Slight panel uplift along asphalt path



Photo Point 20 - Typical wear/weathering of asphalt path. No risk to cap.



Photo Point 21 – minor cracks in pathway. Does not pose risk to cap.



Photo Point 22 – Thin cracks in pathway



Photo Point 22 – Thin cracks in pathway



Photo Point 23 - crack in asphalt path. No risk to cap.



Photo Point 24 – Dog dig hole, approx. 3 inches deep. Photo of restoration below





Photo Point 25 – Dog dig hole, less than 3 inches deep. Photo of restoration below





Photo Point 26 – Crack in concrete near vault



Photo Point 27 – Crack in concrete near curb. No risk to cap.



Photo Point 28 – cracks in curb near tree well. No risk to cap.





Photo Point 29 – uplift of bricks near tree well.



Photo Point 30 – Crack in brick near curb



Photo Point 31 – very minor crack in concrete near vault



Photo Point 32 – caulking in seam in fair condition, looks the same as last year inspection



Photo Point 33 – Dog park in excellent condition



Photo Point 34 – crack in concrete at bottom of stairs looks the same as last year inspection



Photo Point 35 – seam appears the same as last year inspection



Photo Point 36 – seam in fair condition. No risk to cap.



Photo Point 37 – well monument in good condition



Photo Point 38 – crack in asphalt walkway. Does not penetrate cap.



Photo Point 39 – Crack in hardscape side path



Photo Point 40 – minor crack in edge of asphalt path panel



Photo Point 41 – minor cracks and weathering along path



Photo Point 42 – minor cracks and weathering along path

LONNIE ENDICOTT EXCAVATING

P.O. BOX 578
CARLTON, OR 97111
(503) 852-6900 • (503) 852-6147

INVOICE

NAME	DATE
City of Portland	9-12-17
ADDRESS	
Washington Park	
6437 SE Division Pkx	PHONE 503 823 3635

SOLD BY	CASH	C.O.D.	CHARGE	ON ACCT.	MOSE. RET'D
Dan					
QTY.	DESCRIPTION				AMOUNT

1 lb	Sandy loam	\$285.00
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Robert Allen

WO # 261411
CAT # 204
CC # 8 PRPT 0090090
ACCT # 532600
TOTAL # 285.00
INITIALS *RA*

RECEIVED BY	TAX
TOTAL \$285.00	

11242

THANK YOU

All claims and returned goods MUST be accompanied by this bill.

PR 0012234829
DPD 22224187
MD 5000548165



City of Portland

Water Pollution Control Laboratory

6543 N. Burlington Ave. / Portland OR 97203 (503) 823-5600 fax (503) 823-5656
ORELAP Certification ID 4023

LABORATORY ANALYSIS REPORT

Project: **The Fields Park & Tanner Springs** Client: Coordinated Site Analysis
Park Inspections
 Work Order: **W20K042** Project Mgr: Bethany Nabhan
 Received: 11/4/20 15:00
 Submitted By: CSA

Sample	Laboratory ID	Matrix	Type	Sample Collection Date		Qualifier
				Start	End	
WAPK Sandy Loam 1	W20K042-01	Soil	Composite	11/04/20 13:40	11/04/20 13:40	
WAPK Sandy Loam 2	W20K042-02	Soil	Composite	11/04/20 13:50	11/04/20 13:50	

Analyte	Result	Units	MRL	Dil.	Batch	Prepared	Analyzed	Method	Qualifier
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General Chemistry

Total Solids

WAPK Sandy Loam 1 : W20K042-01

Total solids **87.0** % W/W 0.01 B20K070 11/05/20 11/06/20 SM 2540G

WAPK Sandy Loam 2 : W20K042-02

Total solids **85.6** % W/W 0.01 B20K070 11/05/20 11/06/20 SM 2540G

Total Metals

Total Metals by ICPMS

WAPK Sandy Loam 1 : W20K042-01

Cadmium **0.208** mg/kg dry 0.065 20 B20K144 11/09/20 11/09/20 EPA 6020
 Chromium **29.4** mg/kg dry 0.130 20 B20K144 11/09/20 11/09/20 EPA 6020
 Lead **5.79** mg/kg dry 0.260 20 B20K144 11/09/20 11/09/20 EPA 6020

WAPK Sandy Loam 2 : W20K042-02

Cadmium **0.123** mg/kg dry 0.063 20 B20K144 11/09/20 11/09/20 EPA 6020
 Chromium **31.4** mg/kg dry 0.126 20 B20K144 11/09/20 11/09/20 EPA 6020
 Lead **4.96** mg/kg dry 0.253 20 B20K144 11/09/20 11/09/20 EPA 6020

Reported: 12/01/20 14:15

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Jennifer Shackelford, Laboratory Manager



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Project: **The Fields Park & Tanner Springs** Client: **Coordinated Site Analysis**
Park Inspections
Work Order: **W20K042** Received: **11/04/20 15:00**

Analyte	Result	Units	MRL	Dil.	Batch	Prepared	Analyzed	Method	Qualifier
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Fuels

Diesel/Oil Hydrocarbons by GC-FID

WAPK Sandy Loam 1 : W20K042-01

F7

Diesel	ND	mg/kg dry	28	1	B20K075	11/05/20	11/05/20	NWTPH-Dx	
Lube oil	ND	mg/kg dry	56	1	B20K075	11/05/20	11/05/20	NWTPH-Dx	
Surrogate	Result		Expected	%Rec	Limits(%)				
2-Fluorobiphenyl	20.7	mg/kg dry	22.4	92%	50-150	B20K075	11/05/20	NWTPH-Dx	

WAPK Sandy Loam 2 : W20K042-02

F7

Diesel	ND	mg/kg dry	25	1	B20K075	11/05/20	11/05/20	NWTPH-Dx	
Lube oil	ND	mg/kg dry	49	1	B20K075	11/05/20	11/05/20	NWTPH-Dx	
Surrogate	Result		Expected	%Rec	Limits(%)				
2-Fluorobiphenyl	17.6	mg/kg dry	19.6	90%	50-150	B20K075	11/05/20	NWTPH-Dx	

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Project: **The Fields Park & Tanner Springs** Client: **Coordinated Site Analysis**
Park Inspections
Work Order: **W20K042** Received: **11/04/20 15:00**

Analyte	Result	Units	MRL	Dil.	Batch	Prepared	Analyzed	Method	Qualifier
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Semivolatile Organics - SIM

Polynuclear Aromatic Hydrocarbons by GCMS-SIM

WAPK Sandy Loam 1 : W20K042-01

Acenaphthene	ND	ug/kg dry	22	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Acenaphthylene	ND	ug/kg dry	22	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Anthracene	ND	ug/kg dry	22	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Benzo(a)anthracene	ND	ug/kg dry	11	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Benzo(a)pyrene	ND	ug/kg dry	11	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Benzo(b)fluoranthene	ND	ug/kg dry	11	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Benzo(g,h,i)perylene	ND	ug/kg dry	11	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Benzo(k)fluoranthene	ND	ug/kg dry	11	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Chrysene	ND	ug/kg dry	11	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Dibenzo(a,h)anthracene	ND	ug/kg dry	11	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Fluoranthene	ND	ug/kg dry	11	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Fluorene	ND	ug/kg dry	22	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Indeno(1,2,3-cd)pyrene	ND	ug/kg dry	11	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Naphthalene	ND	ug/kg dry	45	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Phenanthrene	ND	ug/kg dry	22	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Pyrene	ND	ug/kg dry	11	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Surrogate	Result		Expected	%Rec	Limits(%)				
2-Methylnaphthalene-d10	100	ug/kg dry	112	92%	31-129	B20K075	11/05/20	11/17/20	EPA 8270-SIM
Fluoranthene-d10	120	ug/kg dry	112	106%	63-132	B20K075	11/05/20	11/17/20	EPA 8270-SIM

WAPK Sandy Loam 2 : W20K042-02

Acenaphthene	ND	ug/kg dry	20	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Acenaphthylene	ND	ug/kg dry	20	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Anthracene	ND	ug/kg dry	20	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Benzo(a)anthracene	ND	ug/kg dry	9.8	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Benzo(a)pyrene	ND	ug/kg dry	9.8	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Benzo(b)fluoranthene	ND	ug/kg dry	9.8	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Benzo(g,h,i)perylene	ND	ug/kg dry	9.8	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Benzo(k)fluoranthene	ND	ug/kg dry	9.8	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Chrysene	ND	ug/kg dry	9.8	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Dibenzo(a,h)anthracene	ND	ug/kg dry	9.8	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Fluoranthene	ND	ug/kg dry	9.8	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Fluorene	ND	ug/kg dry	20	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Indeno(1,2,3-cd)pyrene	ND	ug/kg dry	9.8	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Naphthalene	ND	ug/kg dry	39	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Phenanthrene	ND	ug/kg dry	20	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Pyrene	ND	ug/kg dry	9.8	10	B20K075	11/05/20	11/17/20	EPA 8270-SIM	
Surrogate	Result		Expected	%Rec	Limits(%)				
2-Methylnaphthalene-d10	88	ug/kg dry	98.0	90%	31-129	B20K075	11/05/20	11/17/20	EPA 8270-SIM
Fluoranthene-d10	98	ug/kg dry	98.0	100%	63-132	B20K075	11/05/20	11/17/20	EPA 8270-SIM

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ORELAP Certification ID 4023



Project: **The Fields Park & Tanner Springs** Client: **Coordinated Site Analysis**
Park Inspections
Work Order: **W20K042** Received: **11/04/20 15:00**

Quality Control Report

General Chemistry - QC

Analyte	Result	Units	MRL	Spike Level	Source Result	%Rec (Limits)	RPD (Limit)	Prepared: Analyzed	Qualifier
Total Solids - Batch B20K070									
Blank (B20K070-BLK1)									
Total solids	ND	% W/W	0.01					11/05/20 :11/06/20	
Duplicate (B20K070-DUP1) Source: W20K037-03									
Total solids	97.3	% W/W	0.01		97.3		0.02 (5)	11/05/20 :11/06/20	

Total Metals - QC

Analyte	Result	Units	MRL	Spike Level	Source Result	%Rec (Limits)	RPD (Limit)	Prepared: Analyzed	Qualifier
Total Metals by ICPMS - Batch B20K144									
Blank (B20K144-BLK1)									
Cadmium	ND	mg/kg wet	0.025					11/09/20 :11/09/20	
Chromium	ND	mg/kg wet	0.050					11/09/20 :11/09/20	
Lead	ND	mg/kg wet	0.100					11/09/20 :11/09/20	
Standard Reference Material (B20K144-SRM1)									
Cadmium	109	mg/kg wet	1.05	112		98% (75-125)		11/09/20 :11/09/20	
Chromium	151	mg/kg wet	2.11	166		91% (75-125)		11/09/20 :11/09/20	
Lead	101	mg/kg wet	4.22	114		89% (75-125)		11/09/20 :11/09/20	
Duplicate (B20K144-DUP1) Source: W20K042-01									
Cadmium	0.112	mg/kg dry	0.060		0.208		60 (20)	11/09/20 :11/09/20	M8
Chromium	28.9	mg/kg dry	0.120		29.4		2 (20)	11/09/20 :11/09/20	
Lead	5.07	mg/kg dry	0.240		5.79		13 (20)	11/09/20 :11/09/20	
Matrix Spike (B20K144-MS1) Source: W20K042-01									
Cadmium	13.0	mg/kg dry	0.163	13.0	0.208	98% (75-125)		11/09/20 :11/09/20	
Chromium	66.6	mg/kg dry	0.326	39.1	29.4	95% (75-125)		11/09/20 :11/09/20	
Lead	65.8	mg/kg dry	0.652	65.2	5.79	92% (75-125)		11/09/20 :11/09/20	

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Park Inspections
Work Order: **W20K042** Received: **11/04/20 15:00**

Fuels - QC

Analyte	Result	Units	MRL	Spike Level	Source Result	%Rec (Limits)	RPD (Limit)	Prepared: Analyzed	Qualifier
Diesel/Oil Hydrocarbons by GC-FID - Batch B20K075									
Blank (B20K075-BLK2)									
Diesel	ND	mg/kg wet	25					11/05/20 :11/05/20	F7
Lube oil	ND	mg/kg wet	50					11/05/20 :11/05/20	
Surrogate									
2-Fluorobiphenyl	17.7	mg/kg wet		20.0		88% (50-150)		11/05/20 :11/05/20	
LCS (B20K075-BS2)									
Diesel	428	mg/kg wet	25	400		107% (50-150)		11/05/20 :11/05/20	F7
Lube oil	416	mg/kg wet	50	400		104% (50-150)		11/05/20 :11/05/20	
Surrogate									
2-Fluorobiphenyl	21.7	mg/kg wet		20.0		109% (50-150)		11/05/20 :11/05/20	
Duplicate (B20K075-DUP1) Source: W20K042-01									
Diesel	ND	mg/kg dry	26		ND	(50)		11/05/20 :11/05/20	
Lube oil	ND	mg/kg dry	52		ND	(50)		11/05/20 :11/05/20	
Surrogate									
2-Fluorobiphenyl	19.3	mg/kg dry		20.8		93% (50-150)		11/05/20 :11/05/20	

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Work Order: **W20K042** Received: **11/04/20 15:00**

Semivolatile Organics - SIM - QC

Analyte	Result	Units	MRL	Spike Level	Source Result	%Rec (Limits)	RPD (Limit)	Prepared: Analyzed	Qualifier
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Polynuclear Aromatic Hydrocarbons by GCMS-SIM - Batch B20K075

Blank (B20K075-BLK1)

Acenaphthene	ND	ug/kg wet	20					11/05/20 :11/17/20	
Acenaphthylene	ND	ug/kg wet	20					11/05/20 :11/17/20	
Anthracene	ND	ug/kg wet	20					11/05/20 :11/17/20	
Benzo(a)anthracene	ND	ug/kg wet	10					11/05/20 :11/17/20	
Benzo(a)pyrene	ND	ug/kg wet	10					11/05/20 :11/17/20	
Benzo(b)fluoranthene	ND	ug/kg wet	10					11/05/20 :11/17/20	
Benzo(g,h,i)perylene	ND	ug/kg wet	10					11/05/20 :11/17/20	
Benzo(k)fluoranthene	ND	ug/kg wet	10					11/05/20 :11/17/20	
Chrysene	ND	ug/kg wet	10					11/05/20 :11/17/20	
Dibenzo(a,h)anthracene	ND	ug/kg wet	10					11/05/20 :11/17/20	
Fluoranthene	ND	ug/kg wet	10					11/05/20 :11/17/20	
Fluorene	ND	ug/kg wet	20					11/05/20 :11/17/20	
Indeno(1,2,3-cd)pyrene	ND	ug/kg wet	10					11/05/20 :11/17/20	
Naphthalene	ND	ug/kg wet	40					11/05/20 :11/17/20	
Phenanthrene	ND	ug/kg wet	20					11/05/20 :11/17/20	
Pyrene	ND	ug/kg wet	10					11/05/20 :11/17/20	

Surrogate

2-Methylnaphthalene-d10	78	ug/kg wet		100		78% (31-129)		11/05/20 :11/17/20	
Fluoranthene-d10	110	ug/kg wet		100		107% (63-132)		11/05/20 :11/17/20	

LCS (B20K075-BS1)

Acenaphthene	70.8	ug/kg wet	20	80.0		88% (49-122)		11/05/20 :11/17/20	
Acenaphthylene	74.4	ug/kg wet	20	80.0		93% (51-123)		11/05/20 :11/17/20	
Anthracene	82.4	ug/kg wet	20	80.0		103% (62-115)		11/05/20 :11/17/20	
Benzo(a)anthracene	80.8	ug/kg wet	10	80.0		101% (63-112)		11/05/20 :11/17/20	
Benzo(a)pyrene	77.6	ug/kg wet	10	80.0		97% (62-117)		11/05/20 :11/17/20	
Benzo(b)fluoranthene	67.6	ug/kg wet	10	80.0		84% (53-117)		11/05/20 :11/17/20	
Benzo(g,h,i)perylene	71.6	ug/kg wet	10	80.0		90% (42-128)		11/05/20 :11/17/20	
Benzo(k)fluoranthene	76.8	ug/kg wet	10	80.0		96% (53-124)		11/05/20 :11/17/20	
Chrysene	76.4	ug/kg wet	10	80.0		96% (63-119)		11/05/20 :11/17/20	
Dibenzo(a,h)anthracene	70.8	ug/kg wet	10	80.0		88% (44-129)		11/05/20 :11/17/20	
Fluoranthene	81.2	ug/kg wet	10	80.0		102% (63-115)		11/05/20 :11/17/20	
Fluorene	73.6	ug/kg wet	20	80.0		92% (58-113)		11/05/20 :11/17/20	
Indeno(1,2,3-cd)pyrene	71.6	ug/kg wet	10	80.0		90% (46-127)		11/05/20 :11/17/20	
Naphthalene	77.2	ug/kg wet	40	80.0		96% (37-118)		11/05/20 :11/17/20	
Phenanthrene	77.6	ug/kg wet	20	80.0		97% (49-119)		11/05/20 :11/17/20	
Pyrene	83.6	ug/kg wet	10	80.0		104% (63-117)		11/05/20 :11/17/20	

Surrogate

2-Methylnaphthalene-d10	85	ug/kg wet		100		85% (31-129)		11/05/20 :11/17/20	
Fluoranthene-d10	110	ug/kg wet		100		114% (63-132)		11/05/20 :11/17/20	

Reported: 12/01/20 14:15

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Jennifer Shackelford

Jennifer Shackelford, Laboratory Manager



City of Portland
Water Pollution Control Laboratory

6543 N. Burlington Ave. / Portland OR 97203 (503) 823-5600 fax (503) 823-5656
ORELAP Certification ID 4023



Project: **The Fields Park & Tanner Springs** Client: **Coordinated Site Analysis**
Work Order: **W20K042** Received: **11/04/20 15:00**

Semivolatile Organics - SIM - QC

Analyte	Result	Units	MRL	Spike Level	Source Result	%Rec (Limits)	RPD (Limit)	Prepared: Analyzed	Qualifier
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Polynuclear Aromatic Hydrocarbons by GCMS-SIM - Batch B20K075

Duplicate (B20K075-DUP2)

Source: W20K042-01

Acenaphthene	ND	ug/kg dry	21		ND	(30)	11/05/20 :11/17/20	
Acenaphthylene	ND	ug/kg dry	21		ND	(30)	11/05/20 :11/17/20	
Anthracene	ND	ug/kg dry	21		ND	(30)	11/05/20 :11/17/20	
Benzo(a)anthracene	ND	ug/kg dry	10		ND	(30)	11/05/20 :11/17/20	
Benzo(a)pyrene	ND	ug/kg dry	10		ND	(30)	11/05/20 :11/17/20	
Benzo(b)fluoranthene	ND	ug/kg dry	10		ND	(30)	11/05/20 :11/17/20	
Benzo(g,h,i)perylene	ND	ug/kg dry	10		ND	(30)	11/05/20 :11/17/20	
Benzo(k)fluoranthene	ND	ug/kg dry	10		ND	(30)	11/05/20 :11/17/20	
Chrysene	ND	ug/kg dry	10		ND	(30)	11/05/20 :11/17/20	
Dibenzo(a,h)anthracene	ND	ug/kg dry	10		ND	(30)	11/05/20 :11/17/20	
Fluoranthene	ND	ug/kg dry	10		ND	(30)	11/05/20 :11/17/20	
Fluorene	ND	ug/kg dry	21		ND	(30)	11/05/20 :11/17/20	
Indeno(1,2,3-cd)pyrene	ND	ug/kg dry	10		ND	(30)	11/05/20 :11/17/20	
Naphthalene	ND	ug/kg dry	42		ND	(30)	11/05/20 :11/17/20	
Phenanthrene	ND	ug/kg dry	21		ND	(30)	11/05/20 :11/17/20	
Pyrene	ND	ug/kg dry	10		ND	(30)	11/05/20 :11/17/20	
Surrogate								
2-Methylnaphthalene-d10	85	ug/kg dry		104		82% (31-129)	11/05/20 :11/17/20	
Fluoranthene-d10	100	ug/kg dry		104		99% (63-132)	11/05/20 :11/17/20	

Matrix Spike (B20K075-MS1)

Source: W20K042-01

Acenaphthene	185	ug/kg dry	22	217	ND	85% (49-122)	11/05/20 :11/17/20	
Acenaphthylene	200	ug/kg dry	22	217	ND	92% (51-123)	11/05/20 :11/17/20	
Anthracene	206	ug/kg dry	22	217	ND	95% (62-115)	11/05/20 :11/17/20	
Benzo(a)anthracene	205	ug/kg dry	11	217	ND	95% (63-112)	11/05/20 :11/17/20	
Benzo(a)pyrene	192	ug/kg dry	11	217	ND	88% (62-117)	11/05/20 :11/17/20	
Benzo(b)fluoranthene	167	ug/kg dry	11	217	ND	77% (53-117)	11/05/20 :11/17/20	
Benzo(g,h,i)perylene	173	ug/kg dry	11	217	ND	80% (42-128)	11/05/20 :11/17/20	
Benzo(k)fluoranthene	189	ug/kg dry	11	217	ND	87% (53-124)	11/05/20 :11/17/20	
Chrysene	188	ug/kg dry	11	217	ND	87% (63-119)	11/05/20 :11/17/20	
Dibenzo(a,h)anthracene	177	ug/kg dry	11	217	ND	81% (44-129)	11/05/20 :11/17/20	
Fluoranthene	203	ug/kg dry	11	217	ND	94% (63-115)	11/05/20 :11/17/20	
Fluorene	179	ug/kg dry	22	217	ND	82% (58-113)	11/05/20 :11/17/20	
Indeno(1,2,3-cd)pyrene	175	ug/kg dry	11	217	ND	81% (46-127)	11/05/20 :11/17/20	
Naphthalene	192	ug/kg dry	43	217	ND	88% (37-118)	11/05/20 :11/17/20	
Phenanthrene	193	ug/kg dry	22	217	ND	89% (49-119)	11/05/20 :11/17/20	
Pyrene	209	ug/kg dry	11	217	ND	96% (63-117)	11/05/20 :11/17/20	
Surrogate								
2-Methylnaphthalene-d10	110	ug/kg dry		108		102% (31-129)	11/05/20 :11/17/20	
Fluoranthene-d10	120	ug/kg dry		108		107% (63-132)	11/05/20 :11/17/20	

Reported: 12/01/20 14:15

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Jennifer Shackelford

Jennifer Shackelford, Laboratory Manager



City of Portland
Water Pollution Control Laboratory

6543 N. Burlington Ave. / Portland OR 97203 (503) 823-5600 fax (503) 823-5656
ORELAP Certification ID 4023



Project:	The Fields Park & Tanner Springs Park Inspections	Client:	Coordinated Site Analysis
Work Order:	W20K042	Received:	11/04/20 15:00

Qualifiers

F7 This sample underwent silica gel clean-up.
M8 The matrix duplicate control limit is not applicable at concentrations less than 5 times the reporting limit.

Definitions

DET	Analyte Detected	ND	Analyte Not Detected at or above the reporting limit
MRL	Method Reporting Limit	MDL	Method Detection Limit
NR	Not Reportable	dry	Sample results reported on a dry weight basis
% Rec.	Percent Recovery	RPD	Relative Percent Difference
*	This analyte is not certified under NELAP		

Reported: 12/01/20 14:15

Jennifer Shackelford

Jennifer Shackelford, Laboratory Manager

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Water Pollution Control Laboratory
6543 N. Burlington Ave.
Portland, Oregon 97203-4552
Sample Custodian: (503) 823-5696
General Lab: (503) 823-5681



City of Portland
Chain-of-Custody



Bureau of Environmental Services

Date: 11/4/2020

Lab Work Order #: W20K042

Collected By: BLN

Contact Info: 3-1144

Client Name: Coordinated Site Analysis

Project Number (if applicable): 7ESPKUB00048

Project Name: The Fields Park + Tanner Springs Park Inspect. CSA Contact Name: Bethany Nabhan

Requested Analyses

Lab Number	Follow-up Tests:																Turn-Around-Time Request:			
	<input checked="" type="checkbox"/> Run TCLP metals if limit exceeded <input type="checkbox"/> Run NWTPH-Dx and NWTPH-Gx if detects on NWTPH-HCID <input type="checkbox"/> Run PAHs if detects on NWTPH-Dx <input type="checkbox"/> Run VOCs if detects on NWTPH-Gx					NWTPH-HCID	NWTPH-Dx	NWTPH-Gx	PCB Aroclors (low-level)	PAHs	Priority Pollutant 13 Metals	RCRA 8 Metals	Total Metals	(As, Cd, Cr, Cu, Pb, Hg, Zn)	Total Metals (Cd, Cr, Pb)	VOCs	TOC	HOLD	# of Containers	Remarks
01	WAPK Sandy Loam 1	11/4/20	13:40	C	S	•				•						•			3	
02	WAPK Sandy Loam 2	11/4/20	13:50	C	S	•				•						•			3	

Relinquished By:

Signature:
Printed Name: Bethany Nabhan

Date: 11/4/20
Time: 15:00

Received By:

Signature:
Printed Name: Matt Clark

Date: 11/4/20
Time: 15:00

Relinquished By:

Signature: _____
Printed Name: _____

Date: _____
Time: _____

Received By:

Signature: _____
Printed Name: _____

Date: _____
Time: _____

WPCL Cooler Receipt Form

Work Order Number: W20K 042 Cooler Receipt Form Filled Out By: hc

Project: The Fields Park + Tanner Springs Park Inspect.

Received on ice: (YES) NO (circle one) [If directly from field, indicate here: _____]

Sample(s) Received From: CBWTP fridge _____ Client ✓ Courier _____

Temperature (°C): 16

	Yes	No	N/A
Is the COC present and signed?	<u>✓</u>		
Are sample bottles intact?	<u>✓</u>		
Do the COC and sample labels match?	<u>✓</u>		
Are the appropriate containers used?	<u>✓</u>		
Are samples appropriately preserved?			<u>✓</u>
Do VOA vials or alkalinity bottles have Headspace? (circle which this applies to)			<u>✓</u>
Are samples received within holding times (except for pH and residual chlorine)?	<u>✓</u>		

Pres. #	Preservative	LIMS ID	Standard Preservation Amounts
1	HNO ₃ (1:1) to pH <2		0.5mL/250mL; 1.0mL/500mL; 4-5 drops/50mL centrifuge tube
2	H ₂ SO ₄ (18N) to pH <2		0.4mL/250mL; 0.8mL/500mL ; 1.6mL/1000mL
3	HCl (1:1) to pH <2		1.0mL/500mL; 2.0mL/1000mL
4	HCl (1:1) to pH 2-3		For TOC: 2-5 drops/250mL
5	NaOH (pellets) to pH >12		4-10 pellets/500mL; 8-20 pellets/1000mL

Date	Time	Analyst	Sample LIMS ID	Bottle ID	Pres. #	Comments

Comments: _____



City of Portland
Water Pollution Control Laboratory
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ORELAP Certification ID 4023



LABORATORY ANALYSIS REPORT

Project: **Parks Bureau Misc**
Work Order: **W21I080**
Received: 9/8/21 15:39
Submitted By: Client

Client: Parks Bureau
Project Mgr: Peter Abrams

Sample	Laboratory ID	Matrix	Type	Sample Collection Date		Qualifier
				Start	End	
SWGSL-1	W21I080-01	Soil	Composite	09/08/21 02:40	09/08/21 02:40	

Analyte	Result Units	MRL	Dil.	Batch	Prepared	Analyzed	Method	Qualifier
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SWGSL-1 : W21I080-01

General Chemistry

Total solids	94.1 % W/W	0.01		B21I160	09/10/21	09/11/21	SM 2540G	
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Total Metals

Total Metals by ICPMS

Arsenic	3.17 mg/kg dry	0.058	20	B21I203	09/14/21	09/15/21	EPA 6020	
Barium	179 mg/kg dry	1.17	20	B21I203	09/14/21	09/15/21	EPA 6020	
Cadmium	0.101 mg/kg dry	0.058	20	B21I203	09/14/21	09/15/21	EPA 6020	
Chromium	33.0 mg/kg dry	0.117	20	B21I203	09/14/21	09/15/21	EPA 6020	
Lead	4.98 mg/kg dry	0.233	20	B21I203	09/14/21	09/15/21	EPA 6020	
Mercury	0.0138 mg/kg dry	0.00874	20	B21I203	09/14/21	09/15/21	EPA 6020	
Selenium	ND mg/kg dry	1.17	20	B21I203	09/14/21	09/15/21	EPA 6020	
Silver	ND mg/kg dry	0.058	20	B21I203	09/14/21	09/15/21	EPA 6020	

Fuels

Hydrocarbon Scan by GC-FID

Gasoline	ND mg/kg dry	20	1	B21I144	09/09/21	09/09/21	NWTPH-HCID	
Diesel	ND mg/kg dry	51	1	B21I144	09/09/21	09/09/21	NWTPH-HCID	
Lube oil	ND mg/kg dry	102	1	B21I144	09/09/21	09/09/21	NWTPH-HCID	
Surrogate	Result	Expected	%Rec	Limits(%)				
2-Fluorobiphenyl	10.2 mg/kg dry	10.2	100%	50-150	B21I144	09/09/21	09/09/21	NWTPH-HCID

Reported: 09/23/21 07:10

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Jennifer Shackelford

Jennifer Shackelford, Laboratory Manager



City of Portland
Water Pollution Control Laboratory

6543 N. Burlington Ave. / Portland OR 97203 (503) 823-5600 fax (503) 823-5656
ORELAP Certification ID 4023



Project: **Parks Bureau Misc**
Work Order: **W21I080**

Client: **Parks Bureau**
Received: **09/08/21 15:39**

Quality Control Report

General Chemistry - QC

Analyte	Result	Units	MRL	Spike Level	Source Result	%Rec (Limits)	RPD (Limit)	Prepared: Analyzed	Qualifier
Total Solids - Batch B21I160									
Blank (B21I160-BLK1)									
Total solids	ND	% W/W	0.01					09/10/21 :09/11/21	
Duplicate (B21I160-DUP1) Source: W21I080-01									
Total solids	94.1	% W/W	0.01		94.1		0.02 (5)	09/10/21 :09/11/21	

Total Metals - QC

Analyte	Result	Units	MRL	Spike Level	Source Result	%Rec (Limits)	RPD (Limit)	Prepared: Analyzed	Qualifier
Total Metals by ICPMS - Batch B21I203									
Blank (B21I203-BLK1)									
Arsenic	ND	mg/kg wet	0.025					09/14/21 :09/15/21	
Barium	ND	mg/kg wet	0.500					09/14/21 :09/15/21	
Cadmium	ND	mg/kg wet	0.025					09/14/21 :09/15/21	
Chromium	ND	mg/kg wet	0.050					09/14/21 :09/15/21	
Lead	ND	mg/kg wet	0.100					09/14/21 :09/15/21	
Mercury	ND	mg/kg wet	0.00375					09/14/21 :09/15/21	
Selenium	ND	mg/kg wet	0.500					09/14/21 :09/15/21	
Silver	ND	mg/kg wet	0.025					09/14/21 :09/15/21	
Standard Reference Material (B21I203-SRM1)									
Arsenic	91.7	mg/kg wet	1.06	102		90% (75-125)		09/14/21 :09/15/21	
Barium	308	mg/kg wet	21.2	341		90% (75-125)		09/14/21 :09/15/21	
Cadmium	107	mg/kg wet	1.06	112		95% (75-125)		09/14/21 :09/15/21	
Chromium	145	mg/kg wet	2.12	166		87% (75-125)		09/14/21 :09/15/21	
Lead	97.7	mg/kg wet	4.25	114		86% (75-125)		09/14/21 :09/15/21	
Mercury	4.95	mg/kg wet	0.159	6.25		79% (75-125)		09/14/21 :09/15/21	
Selenium	93.7	mg/kg wet	21.2	99.4		94% (75-125)		09/14/21 :09/15/21	
Silver	31.3	mg/kg wet	1.06	34.9		90% (75-125)		09/14/21 :09/15/21	
Duplicate (B21I203-DUP1) Source: W21I116-01									
Arsenic	4.84	mg/kg dry	0.091		4.87		0.6 (20)	09/14/21 :09/15/21	
Barium	193	mg/kg dry	1.82		187		3 (20)	09/14/21 :09/15/21	
Cadmium	0.170	mg/kg dry	0.091		0.170		0.02 (20)	09/14/21 :09/15/21	
Chromium	26.3	mg/kg dry	0.182		25.4		3 (20)	09/14/21 :09/15/21	
Lead	8.80	mg/kg dry	0.364		8.78		0.2 (20)	09/14/21 :09/15/21	
Mercury	0.0169	mg/kg dry	0.0136		0.0174		3 (20)	09/14/21 :09/15/21	
Selenium	ND	mg/kg dry	1.82		ND		(20)	09/14/21 :09/15/21	

Reported: 09/23/21 07:10

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Jennifer Shackelford

Jennifer Shackelford, Laboratory Manager



City of Portland
Water Pollution Control Laboratory

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ORELAP Certification ID 4023



Project: **Parks Bureau Misc**
Work Order: **W21I080**

Client: **Parks Bureau**
Received: **09/08/21 15:39**

Total Metals - QC

Analyte	Result	Units	MRL	Spike Level	Source Result	%Rec (Limits)	RPD (Limit)	Prepared: Analyzed	Qualifier
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Total Metals by ICPMS - Batch B21I203

Duplicate (B21I203-DUP1) **Source: W21I116-01**

Silver	ND	mg/kg dry	0.091		ND	(20)	09/14/21 :09/15/21	
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Matrix Spike (B21I203-MS1) **Source: W21I116-01**

Arsenic	23.1	mg/kg dry	0.246	19.6	4.87	93% (75-125)	09/14/21 :09/15/21	
Barium	500	mg/kg dry	4.91	295	187	106% (75-125)	09/14/21 :09/15/21	
Cadmium	18.9	mg/kg dry	0.246	19.6	ND	96% (75-125)	09/14/21 :09/15/21	
Chromium	86.3	mg/kg dry	0.491	58.9	25.4	103% (75-125)	09/14/21 :09/15/21	
Lead	97.8	mg/kg dry	0.982	98.2	8.78	91% (75-125)	09/14/21 :09/15/21	
Mercury	0.920	mg/kg dry	0.0368	0.982	ND	94% (75-125)	09/14/21 :09/15/21	
Selenium	98.6	mg/kg dry	4.91	98.2	ND	100% (75-125)	09/14/21 :09/15/21	
Silver	20.0	mg/kg dry	0.246	19.6	ND	102% (75-125)	09/14/21 :09/15/21	

Fuels - QC

Analyte	Result	Units	MRL	Spike Level	Source Result	%Rec (Limits)	RPD (Limit)	Prepared: Analyzed	Qualifier
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Hydrocarbon Scan by GC-FID - Batch B21I144

Blank (B21I144-BLK1)

Gasoline	ND	mg/kg wet	17				09/09/21 :09/09/21	
Diesel	ND	mg/kg wet	42				09/09/21 :09/09/21	
Lube oil	ND	mg/kg wet	83				09/09/21 :09/09/21	

Surrogate

2-Fluorobiphenyl	8.23	mg/kg wet		8.33		99% (50-150)	09/09/21 :09/09/21	
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Duplicate (B21I144-DUP1) **Source: W21I080-01**

Gasoline	ND	mg/kg dry	21		ND		09/09/21 :09/09/21	
Diesel	ND	mg/kg dry	51		ND		09/09/21 :09/09/21	
Lube oil	ND	mg/kg dry	103		ND		09/09/21 :09/09/21	

Surrogate

2-Fluorobiphenyl	9.41	mg/kg dry		10.3		92% (50-150)	09/09/21 :09/09/21	
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Definitions

DET	Analyte Detected	ND	Analyte Not Detected at or above the reporting limit
MRL	Method Reporting Limit	MDL	Method Detection Limit
NR	Not Reportable	dry	Sample results reported on a dry weight basis
% Rec.	Percent Recovery	RPD	Relative Percent Difference
*	This analyte is not certified under NELAP		

Reported: 09/23/21 07:10

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Jennifer Shackelford

Jennifer Shackelford, Laboratory Manager

Date: 9/8/2021

Lab Work Order #: W21I080

Collected By: Kyle DeHart

Contact Info: (503) 502-4534

Project Number (if applicable): PKWC000016

Parks Contact Name: **Kyle DeHart**


Requested Analyses

[illegible]

Sample Matrix - DI = DI Water, G = Gas, GW = Groundwater, IWW = Industrial Wastewater, MWW = Municipal Wastewater, PC = Paint Chips, SED = Sediment, SL = Soil, STW = Stormwater, SFW = Surface water

Signature: Kyle DeHart
Printed Name: Kyle DeHart

Date: 9/8/2021
Time: 3:39pm

Signature: 
Printed Name: Susanna Blunt

Date: 9/8/21
Time: 1539

Signature: _____ Date: _____
Printed Name: _____ Time: _____

Signature: _____ Date: _____

Printed Name: _____ Time: _____

WPCL Cooler Receipt Form

Work Order Number: W21I080

Cooler Receipt Form Filled Out By: SB

Project: Parks Bureau Misc.

Received on ice: YES NO (circle one) [If directly from field, indicate here: ✓]

Sample(s) Received From: CBWTP fridge _____ Client ✓ Courier _____ SR fridge _____

Temperature (°C): 20

	Yes	No	N/A
Is the COC present and signed?	<u>✓</u>		
Are sample bottles intact?	<u>✓</u>		
Do the COC and sample labels match?	<u>✓</u>		
Are the appropriate containers used?	<u>✓</u>		
Are samples appropriately preserved?	<u>✓</u> *		
Are VOA vials completely filled (zero Headspace)?			<u>✓</u>
Are alkalinity bottles completely filled (zero Headspace)? Note if filled in lab.			<u>✓</u>
Are samples received within holding times (except for pH and residual chlorine)?	<u>✓</u>		

Pres. #	Preservative	LIMS ID	Standard Preservation Amounts
1	HNO ₃ (1:1) to pH <2		0.5mL/250mL; 1.0mL/500mL; 4-5 drops/50mL centrifuge tube
2	H ₂ SO ₄ (18N) to pH <2		0.4mL/250mL; 0.8mL/500mL ; 1.6mL/1000mL
3	HCl (1:1) to pH <2		1.0mL/500mL; 2.0mL/1000mL
4	HCl (1:1) to pH 2-3		For TOC: 2-5 drops/250mL
5	NaOH to pH >12		4-10 pellets/500mL; 4 mL 10N/1000mL

Date	Time	Analyst	Sample LIMS ID	Bottle ID	Pres. #	Comments

Comments: * VOA vials pre-preserved in House.
